



Rapid Fielding A Path for Emerging Concept and Capability Prototyping

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Purpose



Introduce a shift in ASD R&E/ Rapid Fielding (RF) Operating Model

Current Model (2009-2013)

- Nearly 85% of the funds received were allocated to COCOM-stated, near-term gaps
 - Focus on 1-2 year projects – development/modification and transition
 - Strong collaboration with the Services from the outset
- Resulted in:
 - 167 successful capability demonstrations with an 85% transition to the field, PoR or GSA schedule
 - Lower risk, more mature and focused concepts
 - More operationally-suitable prototypes

Future Model (2014-Beyond)

- Maintain roughly 55% of the funds received for the current model
- Remaining 45% go to prototypes aligned against DoD/Chairman's Gap-level interest areas
 - More strategic in nature; increased emphasis on anticipating capability needs/opportunities
 - Demonstrate a major capability change, or fill a design/industrial gap
 - Explore technical capability options and methods of development



What's Really Changing?



An increased commitment to use concept & development prototyping to:

- Expand the realm of the possible with or without driving a follow-on procurement activity

Soldier-Warfighter Operationally Responsive Deployer for Space (SWORDS) (JCTD) – low cost (<\$2M) rapidly deployable Micro Satellite Launch Vehicle →



- Provide a hedge against technical uncertainty or unanticipated threats *

NAUTICUS (ECTD) – a compact underwater short-range active interrogation system that can non-invasively determine the presence of high explosives (HE) and special nuclear materials (SNM) inside a small boat or submerged object of interest

- Cost-effectively enhance interoperability and reduce lifecycle costs*

70mm Rocket Penetrator Guidance System (FCT) – a laser-designated, lock-on-before-launch rocket using JDAM semi-active laser seeker and M282 enhanced electronic delay warhead. Provides low cost, guided rocket with 1 meter CEP accuracy, selectable delays, and enhanced range from 1.5Km to 8Km. →



- Respond to other areas as defined by Mission Area Analysis →





Prototype Spectrum



| TRL 1 - 3 | TRL 4 | TRL 5 | TRL 6 | TRL 7 | TRL 8 | TRL 9 |
|-------------|-------------------------|------------------------|-------|---|-------------------------|----------------------|
| Pre-Concept | Mtrl. Solution Analysis | Technology Development | | Engineering & Manufacturing Development | Production & Deployment | Operations & Support |



Concept Prototypes
(e.g. SWORDS)



Development Prototypes
(e.g. Predator)



Operational/Fieldable Prototypes
(e.g. HOGJ)





RF's Future Lines of Operation



Identify, develop and demonstrate multi-domain technologies and concepts to satisfy DoD, multi-Service and COCOM priorities

- **Concept Prototyping**
 - To introduce a new technical/operational option without necessarily driving a follow-on procurement
 - Will be competitively selected among the services
 - Measure: Demonstrates feasibility with a resulting analysis regarding operational value
- **Development Prototyping**
 - To anticipate future threats and to mitigate risk to major acquisition programs
 - Measure: Increased end-user capability resilience in a contested environment
- **Operational/Fieldable Prototyping**
 - For Rapid Response Priorities (Warfighter SIG, JUON & JEONs); mostly COCOM driven
 - For lower cost replacements; and to cost effectively extend system service life (Better Buying Power 2.0)
 - Measure: Satisfies threshold performance needs and affordability target inside 18 months



Working with Rapid Fielding

Concept Prototype

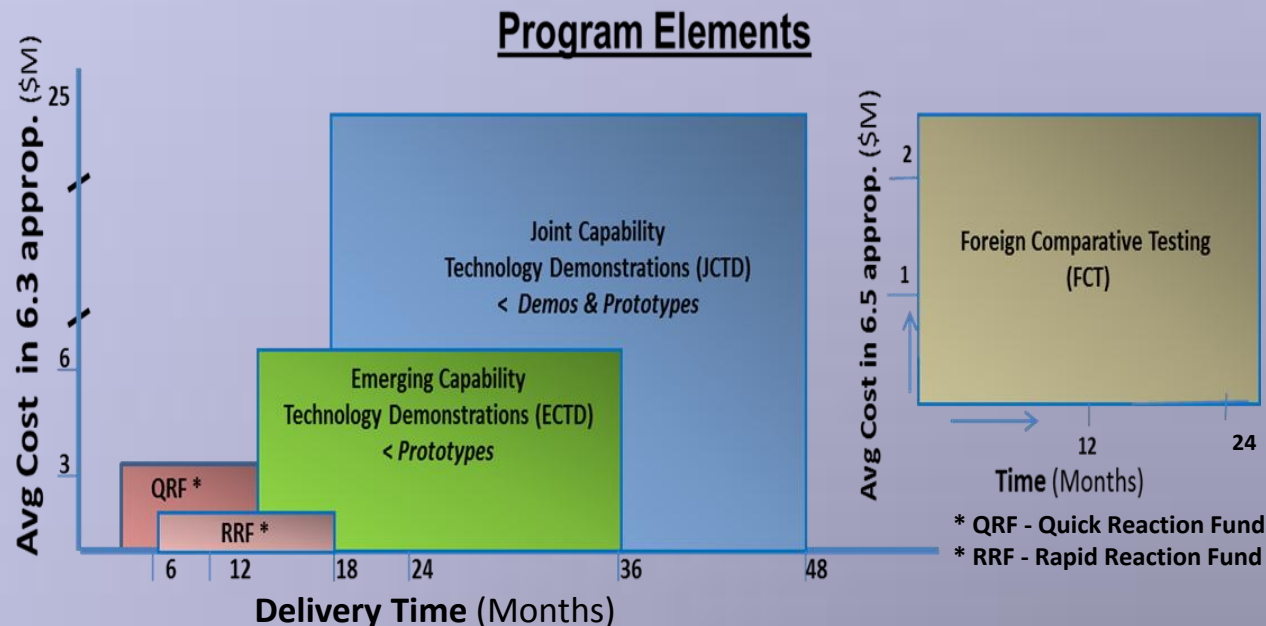
- *ECTD*

Development Prototype

- *JCTD*

Operational Prototype

- *QRSP*
- *FCT*



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